REMARKS/ARGUMENTS

The Examiner is thanked for their review of the application.

Claims 1-6, 9-11, 14-19, 25-28 remain in this application. Claims 1, 2, 5, 10, 14, 15, 26 and 28 have been amended. No new matter has been added.

In the Office Action dated November 16, 2006, the Examiner has rejected Claims 5, 10 under 35 U.S.C. 101 stating that they "appear to be a mixing of two distinct statutory classes of invention. The recitation of 'wherein a new data source provides new data subsequent to providing initial prices by optimizing prices' is a positive recitation to a method step. Claims 5 and 10 depend from apparatus claims. Apparatus claims that contain recitations that positively recite the use of recited structure in a method step are not considered statutory because the claim is bridging two distinct statutory classes of invention."

In the same Office Action the Examiner also rejected Claims 5, 10 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding this rejection the Examiner has stated that "it is not clear if these claims are apparatus claims or method claims. The recitation of 'wherein a new data source provides new data subsequent to providing initial prices by optimizing prices' is a positive recitation to a method step in what is otherwise considered to be an apparatus type claim. One wishing to avoid infringement would not know if just having the system as claimed would be infringement, or if having the claimed system and using it in the claimed manner would be infringement (i.e. having a new data source provide new data subsequent to providing initial prices). It is also not clear if applicant is now trying to claim their invention as including the data source that provides the new data, in part due to the fact that the claim reads like a method step. Is the data source being claimed as part of the invention? For claim 10, there is no antecedent basis for 'the new data source', 'the econometric engine', and 'the financial model engine'. None of these elements has been recited in claim 1, which is the claim that claim 10 depends from. These elements do appear in claim 5, but claim 10 does not depend to claim 5. Are these elements part of

claim 1 as the language 'the new data source' implies? The use of 'the' implies that they were previously recited in claim 1, which they were not. Correction is required."

Dependent Claim 5 has been amended to recite "further comprising a new data source, wherein the new data source provides new data subsequent to the optimization engine providing initial prices, and wherein the new data source includes an econometric engine and a financial model engine."

Dependent Claim 10 has been amended to recite "further comprising a new data source, wherein the new data source provides new data subsequent to the database storing the initial prices for the plurality of products, and wherein the new data source includes an econometric engine and a financial model engine."

Support for amendments to Dependent Claims 5 and 10 may be found in page 26, lines 15-17 of the Specification as filed, which states "new data may then be provided to the system (step 703). Such data may be provided through the Econometric Engine 104 (FIG. 1) or the Financial Model Engine 108, or through another source."

In the same Office Action the Examiner has rejected Claims 5, 10 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Regarding this rejection the Examiner has stated that "The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For claims 5, 10, not disclosed in the specification as originally filed is that there is a 'new data source' that includes an econometric engine and a financial model engine. It was disclosed that the price optimization system 100 (the system that is being claimed) has an econometric engine and a financial model engine, nothing was disclosed about a new data source having what is claimed. This is considered to be new matter." (Emphasis added).

Applicants respectfully traverse the Examiner's rejection. Page 26, lines 15-17 of the specification as filed states "**new data may then be provided to the system (step 703). Such data may be provided through the Econometric Engine 104 (FIG. 1) or the Financial Model Engine**

108, or through another source." (Emphasis added). Applicants suggest that the econometric engine and financial model engine are both clearly identified as providing new data (i.e. new data sources) in the specification. As such Claims 5 and 10 are believed to be allowable.

In the same Office Action the Examiner has rejected Claims 26, 28 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Regarding this rejection the Examiner has stated that "[f]or claims 26, 28, the specification as originally filed did not disclose that optimization was done for 'total sales volume'. Applicant has stated that page 15, line 17, of the specification provides support; however, that portion states "The system can optimize for profit, revenue, and sales.' There is no mention of 'total sales volume' as recited in the claims. The one word 'sales' from line 17 (page 15) could be a monetary amount of sales and is not necessarily a reference to sales volume. The examiner is concerned that this is new matter because the specification did not disclose 'sales volume', but only stated 'sales'. Sales is not necessarily the same as sales volume. This limitation is considered to be new matter." (Emphasis added).

Applicants respectfully traverse the Examiner's rejection. Page 9, line 21 to page 10, line 2 of the Specification as filed states: "the optimization engine may provide a set of prices that allow for the promotion of the one product and the maximization of profit under that condition. The rules normally include an objective, such as optimizing profit or **optimizing volume of sales of a product.**" (Emphasis added). Additionally, page 15, lines 9-13 of the Specification as filed states: "the optimization engine may provide a set of prices that allow for the promotion of the one product and the maximization of profit under that condition. The rules normally include an objective, such as optimizing profit or **optimizing volume of sales of a product**." (Emphasis added). As such, Applicants suggest that volume of sales for products is considered in the optimization process, and is disclosed subject matter.

Dependent Claim 26 has been amended to recite "the optimization engine provides an optimization of sales volume for at least one product of the subset of products." Support may be found at page 9, line 21 to page 10, line 2 of the Specification as filed, as seen above.

Dependent Claim 28 has been amended to recite "providing, using the computer system, an optimization of sales volume for at least one product of the subset of products." Support may be found at page 9, line 21 to page 10, line 2 of the Specification as filed, as seen above.

The Examiner also rejected Claims 1-6, 9-11, 14-19 under 35 U.S.C. 102(b) as being anticipated by Reuhl et al. (5873069).

Regarding Claims 1, 14 the Examiner has stated that "**Reuhl discloses a method and system (with software) where sales and price data is entered into a computer system and the system then 'optimizes' the prices of numerous products based on the inputted sales data**. The software has a rule prioritizer with criteria (rules) for figuring out the final pricing of the products. The rules include looking for sales prices, advertised prices, etc., as well as applying a cent code to the resulting lowest price, and then checking to ensure that the new active price with the cent code is not greater than the competitor price. If the new price with the cent code results in the price being higher than the competitor price, then a new active price is calculated by incrementally relaxing the cent code rule (done by a rule relaxation module portion of the software). If the calculated price for a given item(s) is $4.53, and the cent code rule requires the item to end in a 9, the price is changed to 4.59 in accordance with the cent code rules. Then the system compares the price of $4.59 to the competitor's price to ensure that a higher priority rule (lowest price) is feasible. If $4.59 is not the lowest price, 10 cents is subtracted to arrive at a new price, which is $4.49 (relaxing the cent code rule that stated the price should end in 9, namely from $4.53 to $4.59). The incrementally relaxing of the rule results in the price changing from $4.59 to $4.49. This is done in increments of 10 cents at a time. **The rules are prioritized as claimed because the rules for figuring out prices look to various conditions and moves on to other conditions if prior conditions are not feasible (result in the price being higher than the competitor).** The storage medium of claim 1 is disclosed in column 3, lines 29-32. The steps of storing initial prices are satisfied because at some point you must input some kind of price into the system. This is inherent. Reuhl discloses a product designator for designating a subset of products to optimize prices for. This is because the computer

system (software) only optimizes prices for products that have had new sales data entered into the system. So if sales data for televisions is updated in the system, the prices for batteries will not be changed." (Emphasis added).

The Examiner suggests Reuhl as an example of optimizing product prices similar to the present art. Applicants respectfully traverse the rejection since Reuhl does not teach or suggest "optimizing prices for products in the subset of products, while maintaining the initial prices of all other products of the plurality of products, and wherein the optimizing of prices complies with the relaxed any infeasible rule of the plurality of rules" in the manner as recited by Claim 1. Support can be found in page 3, lines 5-14, and page 21, lines 7-12 of the Specifications as filed. Furthermore, Applicants reiterate their belief that Reuhl does not appear to teach a method of price optimization.

Instead, Reuhl appears to simply provide setting prices to a price lower than competitors' prices, and ending in the digit 9. (Column 6, lines 31-35, Column 11, lines 34-43 and Column 12, lines 34-37). Reuhl's system of price setting is single-faceted. The present invention is multi-faceted, and capable of providing an array of optimizations, including profit optimization, sales optimization or revenue optimization. See page 9, lines 9-19, page 10, lines 12-13, and page 15, line 17 of the Specification as filed. The method described in Reuhl does not appear to achieve this aim, but rather "**specifically**, the price-changing function of the system is **responsive to competitive price data on identical or substantially similar products.**" (Emphasis added). (Column 3, lines 58-61).

Examiner stated that "[t]he intent of having the lowest price on some selected products is an attempt to increase sales volume and profit, by selling other goods to the consumers that are brought to the store for the low price items. Reuhl does teach a method of [price] optimization." Applicants must contend that an action made to increase profit does not necessarily mean optimizing prices. The common definition of optimization is an act, process, or methodology of making something (as a design, system, or decision) as fully perfect, functional, or effective as possible. Merely lowering prices may very well increase profits sometimes; however this is not making the pricing as effective as possible. This is especially true when dealing with brand name products, prestige products, or status items, but may be seen across all retail fields. An example of this may be seen in the huge

economic successes of companies such as Gucci ™, Whole Foods ™, BMW Group ™ as well as many others. Dogmatic reduction in pricing may increase profits but, by its very nature, does not have the computational complexity to create a system that is *as effective as possible*, and is thus not an optimization in the manner recited by Claim 1. Applicants do not suggest that the optimization in the manner recited by Claim 1 will produce superior results in every instance; however, such an optimization is capable of addressing dynamic and varied factors as circumstances require.

Accordingly, the "the prices of numerous products based on the inputted sales data" of Reuhl, as referred to by the Examiner, appears to provide a system of primitive price comparison and reduction rather than a versatile optimization system with adjustable goals. As such, the method disclosed in Reuhl does not function as a sophisticated method of price optimization for a subset of products as recited in Claims 1, 14.

Additionally, with regard to Claim 1 and 14, as the Examiner has stated that "The rules are prioritized as claimed because the rules for figuring out prices look to various conditions and moves on to other conditions if prior conditions are not feasible (result in the price being higher than the competitor)." The Examiner suggests Reuhl as an example of prioritizing rules similar to the present art. The applicants again stress that Reuhl does not appear to teach a method of optimization. Therefore, the discussion of Reuhl's relevance to prioritization as claimed is in a different context than price optimization.

Base Claim 1 has been amended to recite "A computer implemented, price optimization system for optimizing a preferred set of prices for a subset of a plurality of products, comprising: a rule prioritizer configured to **iteratively prioritize** a plurality of relaxable rules, and for **iteratively identifying** at least one lower priority infeasible rule from the plurality of relaxable rules; a rule relaxation module configured to incrementally relax any infeasible rule of the plurality of relaxable rules which has a lower priority than the at least one lower priority infeasible rule, enabling the at least one lower priority infeasible rule to become feasible; a database configured to store initial prices for a plurality of products; a product designator configured to designate a subset of products of the plurality of products, wherein the number of products in the subset of products is less than the number of products in the plurality of products; and an optimization engine configured to optimize

prices for products in the subset of products, while maintaining the initial prices of all other products of the plurality of products and wherein the optimizing of prices complies with the relaxed any infeasible rule of the plurality of rules." (Emphasis added).

Base Claim 14 has been amended to recite "In a computer system, a method for computing a preferred set of prices for a subset of products of a plurality of products, comprising: prioritizing, using the computer system, a plurality of relaxable rules, **wherein the prioritizing of the plurality of rules is iterative**; identifying, using the computer system, at least one lower priority infeasible rule from the plurality of relaxable rules, **wherein the identifying of the plurality of rules is iterative**; incrementally relaxing, using the computer system, any infeasible rule of the plurality of rules which has a lower priority than the at least one lower priority infeasible rule to allow the at least one lower priority infeasible rule of the plurality of rules to become feasible; storing, using the computer system, initial prices for a plurality of products; designating, using the computer system, a subset of products of the plurality of products, wherein the number of products in the subset of products is less than the number of products in the plurality of products; and optimizing, using the computer system, prices for products in the subset of products, while maintaining the initial prices of products of the plurality of products that are not in the subset of products, and wherein the optimizing of prices complies with the relaxed any infeasible rule of the plurality of rules." (Emphasis added).

Support for the amendments to Claims 1 and 14 can be found in page 21, lines 14-16 of the Specifications as filed, which states "[a] default prioritization may be provided, with an interface, which may allow a user to change the prioritization from the default." Additionally, the present invention allows for rule alteration and configuration. Support can be found in page 14, lines 17-22 of the Specifications as filed.

As such, it is respectfully submitted that Reuhl does not teach or suggest a system "configured to iteratively prioritize a plurality of rules" in the manner recited in Claims 1, 14. Support can be found in page 21, lines 14-16 of the Specifications as filed. As such, applicant respectfully traverses the rejection.

It appears that in Reuhl there exists a predetermined set of rules. (Column 11, lines 27-31). Additionally, in Reuhl, the "rules include looking for sales prices, advertised prices, etc., as well as

applying a cent code to the resulting lowest price, and then checking to ensure that the new active price with the cent code is not greater than the competitor price," as stated by the Examiner, and is a static and exhaustive rule set that is not alterable. As such the teachings of Reuhl appear to be static, with no change in rule order, and no capacity to change rule order. (See Figure 9, 10, Column 11, lines 48-67 and Column 12, lines 1-57).

Accordingly, the "rules are prioritized" of Reuhl, as referred to by the Examiner, appears to provide a static system of unalterable steps rather than an active and dynamic iterative prioritization of rules. (Column 11, lines 27-31). As such, the method disclosed in Reuhl appears to not function as a method of **iterative** rule prioritization as recited in Claims 1, 14.

Regarding Claims 2, 15, the Examiner has stated that "the 'N' products are the number of products that the new sales data relates to. N can be the number of televisions that prices are being optimized for."

Dependent Claim 2 has been amended to recite "the product designator for designating a subset enables a number N to be designated, and wherein the product designator selects no more than N products of the plurality of products to form the subset of products, **and wherein the selected no more than N products has the largest impact on the optimization of prices of any subset of no more than N products of the plurality of products."** (Emphasis added).

Likewise, Dependent Claim 15 has been amended to recite "the designating a subset comprises: allowing a number N to be designated; and selecting no more than N products of the plurality of products to form the subset of products**, wherein the selecting no more than N products has the largest impact on the optimizing of prices of any subset of no more than N products of the plurality of products.**" (Emphasis added).

Support for the amendment to Dependent Claims 2 and 15 may be found on page 27, lines 10-19, which states: "**The subset optimization may choose the products that comprise this subset in a way that has the largest impact on the client's objective function**. If, for example, the client's objective is to maximize profit, it is desirable to **populate the subset of products** whose

prices are allowed to change **with those products that are most likely to have the largest impact on profit**. In one way of doing this … to obtain a new set of optimized prices."

Claims 2 and 15 provide for dynamic subset selection and designation **to effectuate an optimization goal**. Reuhl, by contrast, is unable to **select** a subset in the manner claimed in Claims 2 and 15, and must merely rely upon the happenchance of "once new competitors' prices, system user's ad prices or other special prices are entered" to determine which products are processed. (Column 10, lines 31-32). As such, the "selecting no more than N products" as claimed in Claims 2 and 15 is dramatically different from the disclosure of Reuhl.

In sum, Claims 1-6, 9-11, 14-19, 25-28 remain in this application and are now believed to be allowable. Base Claim(s) 1 and 14 have been amended and are now believed to be allowable. Dependent Claims 2, 5, 10, 15, 26 and 28 have been amended and are now believed to be allowable. Dependent Claims 2-6, 9-11, 15-19, and 25-28 which depend therefrom are also believed to be allowable as being dependent from their respective patentable parent Claims 1, 14 for at least the same reasons. Hence, Examiner's rejection of dependent Claims 1-6, 9-11, 14-19, 25-28 are rendered moot in view of the amendment to base Claims 1 and 14. Applicants believe that all pending Claims 1-6, 9-11, 14-19, 25-28 are now allowable over the cited art and are also in allowable form and respectfully request a Notice of Allowance for this application from the Examiner. The commissioner is authorized to charge any fees that may be due to our Deposit Account No. 50-2766 (Order No. DEM1P009). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

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